

Application No.: 10/518324
 Docket No.: BA9308USPCT

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Amendments to ClaimsRECEIVED
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AUG 16 2007

1. (Canceled)
2. (Canceled)

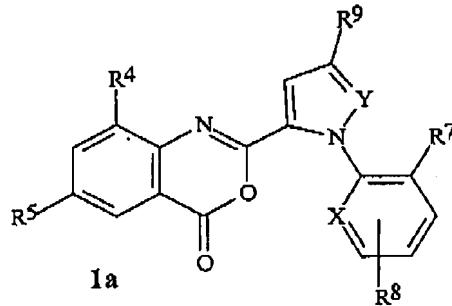
3. (Previously presented) The method of Claim 12 wherein the nominal mole ratio of sulfonyl chloride to carboxylic acid in (1) is from about 1.0 to 1.5; the nominal mole ratio of the *ortho*-amino aromatic carboxylic acid in (2) to carboxylic acid charged in (1) is from about 0.9 to 1.1; the nominal mole ratio of additional sulfonyl chloride added in (3) to carboxylic acid charged in (1) is from about 1.0 to 1.5.

4. (Currently amended) The method of Claim 3 wherein the nominal mole ratio of the pyridine Formula 3 compound charged in (1) to carboxylic acid charged in (1) is from about 1.0 to 2.0; additional pyridine Formula 3 compound is charged in (2); and the nominal mole ratio of the additional pyridine Formula 3 compound charged in (2) to carboxylic acid charged in (1) is from about 2.0 to 4.0.

5. (Canceled)
6. (Canceled)

7. (Previously presented) The method of Claim 12 wherein K is, together with the two contiguous linking carbon atoms, a fused phenyl ring optionally substituted with from one to four substituents independently selected from W or R¹³.

8. (Currently amended) The method of Claim 12 wherein a compound of Formula 1a



wherein

X is N or CR⁶;

Y is N or CH;

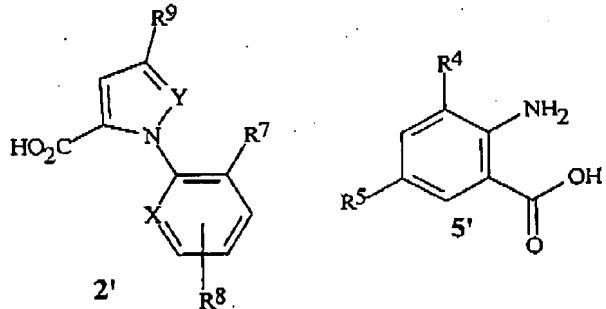
R⁴ is C₁-C₄ alkyl or halogen;R⁵ is H, C₁-C₄ alkyl, C₁-C₄ haloalkyl or halogen;R⁶ and R⁷ are independently H, C₁-C₄ alkyl, C₁-C₄ haloalkyl, halogen, CN or C₁-C₄ haloalkoxy;

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R⁸ is H, C₁-C₄ alkyl, C₂-C₄ alkenyl, C₂-C₄ alkynyl, C₃-C₆ cycloalkyl, C₁-C₄ haloalkyl, C₂-C₄ haloalkenyl, C₂-C₄ haloalkynyl, C₃-C₆ halocycloalkyl, halogen, CN, NO₂, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy, C₁-C₄ alkylthio, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, C₁-C₄ alkylamino, C₂-C₈ dialkylamino, C₃-C₆ cycloalkylamino, (C₁-C₄ alkyl)(C₃-C₆ cycloalkyl)amino, C₂-C₄ alkylcarbonyl, C₂-C₆ alkoxy carbonyl, C₂-C₆ alkylaminocarbonyl, C₃-C₈ dialkylaminocarbonyl or C₃-C₆ trialkylsilyl; and
 R⁹ is CF₃, OCF₃, OCHF₂, OCH₂CF₃ or halogen;

is prepared using a compound of Formula 2' as the Formula 2 compound and a compound of Formula 5' as the Formula 5 compound



9. (Original) The method of Claim 8 wherein

X is N;

Y is N;

R⁴ is CH₃, F, Cl or Br;

R⁵ is CF₃, F, Cl, Br or I;

R⁷ is Cl or Br;

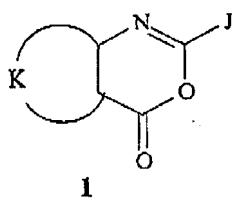
R⁸ is H; and

R⁹ is CF₃, OCHF₂, OCH₂CF₃, Cl or Br.

10. (Canceled)

11. (Canceled)

12. (Currently amended) A method for preparing a fused oxazinone of Formula 1,



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wherein

K is, together with the two contiguous linking carbon atoms, a fused phenyl ring optionally substituted with from one to four substituents independently selected from G, U, W or R¹³;

J is ~~G₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₈ cycloalkyl or C₃-C₈ cycloalkenyl, each optionally substituted with one or more substituents selected from the group consisting of R¹², halogen, CN, NO₂, hydroxy, C₁-C₄ alkoxy, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, C₁-C₄ alkylamino, C₂-C₈ dialkylamino, C₃-C₆ cycloalkylamino, and (C₁-C₄ alkyl)(C₃-C₆ cycloalkyl)amino; or~~

~~J is a pyrrole ring or a pyrazole ring phenyl ring, a benzyl group, a benzoyl group, a 5- or 6-membered heteroaromatic ring, an aromatic 8-, 9- or 10-membered fused carbobicyclic ring system, an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system or a 5- or 6-membered nonaromatic heterocyclic ring optionally including one or two ring members selected from the group consisting of C(=O), SO or S(O)₂, each optionally substituted with from one to four substituents independently selected from G, U, W or R¹³;~~

each G is a 5- or 6-membered nonaromatic heterocyclic ring optionally with including one or two ring members selected from the group consisting of C(=O), SO or S(O)₂, each optionally substituted with from one to four substituents independently selected from W;

each U is a phenyl ring, a benzyl group, a benzoyl group, a 5- or 6-membered heteroaromatic ring, an aromatic 8-, 9- or 10-membered fused carbobicyclic ring system, an aromatic 8-, 9- or 10-membered fused heterobicyclic ring system, each optionally substituted with from one to four substituents independently selected from W;

each W is independently C₁-C₄ alkyl, C₂-C₄ alkenyl, C₂-C₄ alkynyl, C₃-C₆ cycloalkyl, C₁-C₄ haloalkyl, C₂-C₄ haloalkenyl, C₂-C₄ haloalkynyl, C₃-C₆ halocycloalkyl, halogen, CN, NO₂, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy, C₁-C₄ alkylthio, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, C₁-C₄ alkylamino, C₂-C₈ dialkylamino, C₃-C₆ cycloalkylamino, (C₁-C₄ alkyl)(C₃-C₆ cycloalkyl)amino or C₃-C₆ trialkylsilyl;

each R¹² is independently R¹⁹C(=E)- or -O(Q=P(OR¹⁹)₂;

each R¹³ is B(OR¹⁷)₂; NH₂; SH; thiocyanato; C₃-C₈ trialkylsilyloxy; C₁-C₄ alkyl disulfide; SF₅; R¹⁹C(=E)-; R¹⁹C(=E)M-; R¹⁹MC(=E)-; (R¹⁹)MC(=E)M-; -OP(=Q)(OR¹⁹)₂; -S(O)₂MR¹⁹; or R¹⁹S(O)₂M-;

each E is independently O, S, NR¹⁵, NOR¹⁵, NN(R¹⁵)₂, N-S=O, N-CN or N-NO₂;

each M is independently O, NR¹⁸ or S;

Q is O or S;

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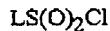
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each R^{15} and each R^{19} is independently H; C_1-C_6 alkyl optionally substituted with one or more substituents selected from the group consisting of CN, NO_2 , hydroxy, C_1-C_4 alkoxy, C_1-C_4 haloalkoxy, C_1-C_4 alkylthio, C_1-C_4 alkylsulfinyl, C_1-C_4 alkylsulfonyl, C_1-C_4 haloalkylthio, C_1-C_4 haloalkylsulfinyl, C_1-C_4 haloalkylsulfonyl, C_1-C_4 alkylamino, C_2-C_8 dialkylamino, CO_2H , C_2-C_6 alkoxy carbonyl, C_2-C_6 alkylcarbonyl, C_3-C_6 trialkylsilyl, and a phenyl ring optionally substituted with one to three substituents independently selected from W; C_1-C_6 haloalkyl; C_3-C_6 cycloalkyl; or a phenyl ring optionally substituted with from one to three substituents independently selected from W;
 each R^{17} is independently H or C_1-C_4 alkyl; or
 $B(OR^{17})_2$ can form a ring wherein the two oxygen atoms are linked by a chain of two to three carbons optionally substituted with one or two substituents independently selected from methyl or C_2-C_6 alkoxy carbonyl; and
 each R^{18} is independently H, C_1-C_6 alkyl or C_1-C_6 haloalkyl.
 comprising:

(1) contacting a carboxylic acid of Formula 2



with a sulfonyl chloride of Formula 4



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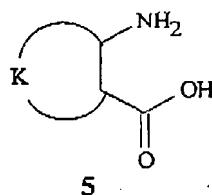
wherein

L is selected from alkyl, haloalkyl, and phenyl optionally substituted with from one to three substituents independently selected from alkyl or halogen;

in the presence of a pyridine Formula 3 compound selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamino, or pyrrolidino,

the nominal mole ratio of sulfonyl chloride to carboxylic acid being from about 0.75 to 1.5;

(2) contacting the mixture prepared in (1) with an *ortho*-amino aromatic carboxylic acid of Formula 5



in the presence of a pyridine Formula 3 compound selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamino, or

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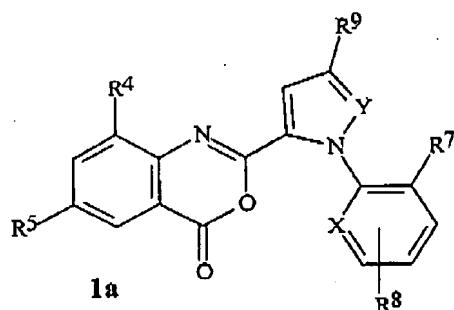
pyrrolidino, the nominal mole ratio of the *ortho*-amino aromatic carboxylic acid to carboxylic acid charged in (1) being from about 0.8 to 1.2; and

(3) adding additional sulfonyl chloride to the mixture prepared in (2), the nominal mole ratio of additional sulfonyl chloride added in (3) to carboxylic acid charged in (1) being at least about 0.5.

13. (Amended) The method of Claim 12 wherein in (1) the carboxylic acid of Formula 2 is contacted with sulfonyl chloride of Formula 4 in the presence of a pyridine Formula 3 compound is selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamine, or pyrrolidine pyridine, 3-picoline, 2,6-lutidine, collidine, 2-picoline and 4-picoline and in (2) the mixture prepared in (1) is contacted with the ortho-amino aromatic carboxylic acid of Formula 5 in the presence of a Formula 3 compound selected from the group consisting of pyridine, 3-picoline, 2,6-lutidine, collidine, 2-picoline and 4-picoline.

14. (Previously presented) The method of Claim 12 wherein sulfonyl chloride of Formula 4 is selected from the group consisting of methanesulfonyl chloride, propanesulfonyl chloride and benzene sulfonyl chloride.

15. (Currently amended) A method for preparing a fused oxazinone of Formula 1a



wherein

X is N or CR⁶;

Y is N or CH;

R⁴ is C₁–C₄ alkyl or halogen;

R⁵ is H, C₁–C₄ alkyl, C₁–C₄ haloalkyl or halogen;

R⁶ and R⁷ are independently H, C₁–C₄ alkyl, C₁–C₄ haloalkyl, halogen, CN or C₁–C₄ haloalkoxy;

R⁸ is H, C₁–C₄ alkyl, C₂–C₄ alkenyl, C₂–C₄ alkynyl, C₃–C₆ cycloalkyl, C₁–C₄ haloalkyl, C₂–C₄ haloalkenyl, C₂–C₄ haloalkynyl, C₃–C₆ halocycloalkyl, halogen, CN, NO₂, C₁–C₄ alkoxy, C₁–C₄ haloalkoxy, C₁–C₄ alkylthio, C₁–C₄ alkylsulfinyl, C₁–C₄ alkylsulfonyl, C₁–C₄ alkylamino, C₂–C₈ dialkylamino,

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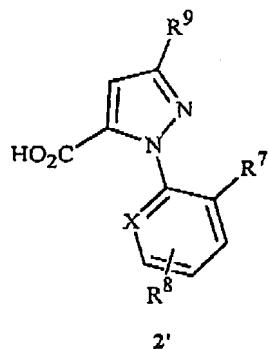
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C_3-C_6 cycloalkylamino, $(C_1-C_4$ alkyl) $(C_3-C_6$ cycloalkyl)amino, C_2-C_4 alkylcarbonyl, C_2-C_6 alkoxy carbonyl, C_2-C_6 alkylaminocarbonyl, C_3-C_8 dialkylaminocarbonyl or C_3-C_6 trialkylsilyl;

R^9 is CF_3 , OCF_3 , $OCHF_2$, OCH_2CF_3 , $S(O)_pCF_3$, $S(O)_pCHF_2$ or halogen; and
 p is 0, 1 or 2;

comprising:

(1) contacting a carboxylic acid of Formula 2'



with a sulfonyl chloride of Formula 4

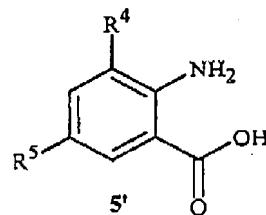


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wherein

L is selected from alkyl, haloalkyl, and phenyl optionally substituted with from one to three substituents independently selected from alkyl or halogen; in the presence of a pyridine Formula 3 compound selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamino, or pyrrolidino, the nominal mole ratio of sulfonyl chloride to carboxylic acid being from about 0.75 to 1.5;

(2) contacting the mixture prepared in (1) with an *ortho*-amino aromatic carboxylic acid of Formula 5'



in the presence of a pyridine Formula 3 compound selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamino, or

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pyrrolidino, the nominal mole ratio of the *ortho*-amino aromatic carboxylic acid to carboxylic acid charged in (1) being from about 0.8 to 1.2; and

(3) adding additional sulfonyl chloride to the mixture prepared in (2), the nominal mole ratio of additional sulfonyl chloride added in (3) to carboxylic acid charged in (1) being at least about 0.5.

16. (Currently amended) The method of Claim 15 wherein in (1) the carboxylic acid of Formula 2 is contacted with sulfonyl chloride of Formula 4 in the presence of a pyridine Formula 3 compound is selected from the group consisting of pyridine, quinoline, isoquinoline and pyridine substituted with alkyl, dimethylamine, or pyrrolidine pyridine, 3-picoline, 2,6-lutidine, collidine, 2-picoline and 4-picoline and in (2) the mixture prepared in (1) is contacted with the ortho-amino aromatic carboxylic acid of Formula 5 in the presence of a Formula 3 compound selected from the group consisting of pyridine, 3-picoline, 2,6-lutidine, collidine, 2-picoline and 4-picoline.

17. (Previously presented) The method of Claim 15 wherein sulfonyl chloride of Formula 4 is selected from the group consisting of methanesulfonyl chloride, propanesulfonyl chloride and benzene sulfonyl chloride.

18. (Previously presented) The method of Claim 15 wherein the nominal mole ratio of sulfonyl chloride to carboxylic acid in (1) is from about 1.0 to 1.5; the nominal mole ratio of the *ortho*-amino aromatic carboxylic acid in (2) to carboxylic acid charged in (1) is from about 0.9 to 1.1; the nominal mole ratio of additional sulfonyl chloride added in (3) to carboxylic acid charged in (1) is from about 1.0 to 1.5.

19. (Currently amended) The method of Claim 18 wherein the nominal mole ratio of the pyridine Formula 3 compound charged in (1) to carboxylic acid charged in (1) is from about 1.0 to 2.0; additional pyridine Formula 3 compound is charged in (2); and the nominal mole ratio of the additional pyridine Formula 3 compound charged in (2) to carboxylic acid charged in (1) is from about 2.0 to 4.0.

20. (Canceled)

21. (Canceled)